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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/731,244

12/09/2003

Glenn A. Cowelchuk

1-74168

4873

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7590

05/15/2006

MACMILLAN, SOBANSKI & TODD, LLC  
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TOLEDO, OH 43604

EXAMINER

AN, SANG WOOK

ART UNIT

PAPER NUMBER

1732

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/731,244	Applicant(s) COWELCHUK ET AL.	
	Examiner Sang W. An	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 March 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 21-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher et al (6460880) in view of Goldbach (6780365) and Kinane (20030080540).

Regarding claim 21, Gallagher et al teach a method of forming an airbag assembly and trim component for a vehicle (abstract) comprising: providing a substrate defining an airbag door (fig 5, 14) but does not teach simultaneously over-molding an airbag chute for mounting the airbag assembly and a hinge for retaining the airbag door on the substrate during deployment of an air bag. However, Kinane teaches that the chute can be separately injection molded from the same molded-in-color polypropylene

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as the substrate (0011& fig 2). Furthermore, Goldbach teaches simultaneously over-molding first (hinge) and second (chute) thermoplastic parts being joined by the base body/substrate (abstract). Therefore Goldbach's teaching could be used in Gallagher et al's method for forming an air bag assembly to simultaneously mold the chute and the hinge in order to reduce cycle time (col 1 lines 42-47) and Kinane's teaching could be used in Gallagher et al's method for forming an air bag assembly to injection mold the chute unto a substrate in order to form the chute out of different material than the substrate.

Regarding claim 22, Gallagher et al teach the hinge and the airbag chute are formed from the same material (col 8 lines 16-21).

Regarding claim 23, Gallagher et al teach forming an outer layer (fig 14, 122) out of urethane foam (col 11 lines 7-9). Gallagher et al also teach forming the substrate layer that is formed from a polypropylene (fig 5 & col 6 lines 22-30).

Regarding claims 24 and 25, Gallagher et al teach forming an outer out of urethane foam layer (col 11 lines 7-11), forming a substrate out of polypropylene (col 6 line 25), and then forming a hinge layer out of another/third plastic material (col 11 lines 35-38).

Regarding claim 26, as set forth in claim 1 rejection, Gallagher et al in view of Goldbach and Kinane teach the idea of simultaneous over-molding the hinge and the chute of the air bag assembly on the substrate. Gallagher et al also teach forming an outer layer made of urethane foam (col 11 lines 7-11) and the substrate (10) being made out of polypropylene (col 6 line 25).

Regarding claims 27 and 28, Gallagher et al teach forming an outer out of urethane foam layer (col 11 lines 7-11), forming a substrate out of polypropylene (col 6 line 25), and then forming a hinge layer out another/third plastic material (col 11 lines 35-38).

Regarding claim 29, Gallagher et al teach the airbag assembly includes an airbag module housing having a closed end and an open end a plurality of outwardly extending mounting hooks being formed at the open end, wherein the airbag chute includes a plurality of hook-receiving apertures for receiving the hooks, wherein the hinge includes a plurality of elongated hook-receiving apertures for receiving the hooks, the hook-receiving apertures of the hinge extending inboard of the hooks such that the hinge is movable between a retracted position and an extended position relative to the chute, and wherein the hook-receiving apertures allow movement of the airbag chute relative to, and unrestrained by the hooks when the hinge moves between the retracted position and the extended position (fig 2 & 5).

4. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher et al (6460880) in view of Goldbach (6780365) and Kinane (20030080540).

Regarding claims 30-32, Gallagher et al teach providing a mold assembly having a mold cavity (fig 6); placing a substrate defining an airbag door into the mold cavity to define first and second cavities (fig 6) but does not teach injecting a first material into the first cavity to form an airbag chute for mounting the airbag assembly and injecting a second material into the second cavity to form a hinge for retaining the airbag door on the substrate during deployment of an air bag. However, Kinane teaches that the chute

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can be separately injection molded from the same molded-in-color polypropylene as the substrate (0011& fig 2). Furthermore, Goldbach teaches simultaneously over-molding first (hinge) and second (chute) thermoplastic parts being joined by the base body/substrate (abstract). Therefore Goldbach's teaching could be used in Gallagher et al's method for forming an air bag assembly to simultaneously mold the chute and the hinge in order to reduce cycle time (col 1 lines 42-47) and Kinane's teaching could be used in Gallagher et al's method for forming an air bag assembly to injection mold the chute unto a substrate in order to form the chute out of different material than the substrate.

5. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher et al (6460880) in view of Goldbach (6780365) and Kinane (20030080540) further in view of Hallard et al (53462349). Gallagher et al do not teach inserting scrim material within the second cavity. However, Hallard et al adding flexible scrim material when making the hinge. Therefore it would have been obvious to use the teachings of Hallard et al in Gallagher et al's method of manufacturing air bag assembly in order to permit unfolding along while preventing complete separation of the door or panel from the fixed wall structure which could cause personal injury (col 3 lines 29-37).

6. Claims 34-36, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher et al (6460880) in view of Kieltyka et al (20030164577).

Regarding claim 34, Gallagher et al teach providing a substrate defining an airbag door, the substrate having a passenger-compartment-facing first surface and a second surface opposite the first surface (fig 1 & 2) and also teach an outer layer (fig

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14) and a hinge layer (fig 14), but does not teach simultaneously over-molding an outer layer on the first surface of the substrate, and a hinge on the second surface of the substrate. However Kieltyka et al teach simultaneously over-molding the upper (hinge) and lower (skin/outer layer) mold surface of a substrate (par 0018). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the teachings Kieltyka et al in Gallagher et al's method of manufacturing air bag assembly in order to reduce cycle time.

Regarding claim 35, Gallagher et al teach that the outer layer and hinge could be made of the same material (col 11 line 7 & col 8 lines 16-28 & col 6 lines 22-30).

Regarding claim 36, as stated in claim 34 rejection, Gallagher in view of Kieltyka teach simultaneous over-molding. Gallagher also teach that prior to the step of over-molding the hinge and the outer layer of the airbag assembly on the substrate, the substrate is formed in a mold (fig 5), and subsequently the hinge and the outer layer are formed in the mold (fig 6), wherein the substrate is formed from a first material (col 6 line 25) and the hinge and the outer layer are formed from second material different from the first material (col 11 line 7).

7. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher et al (6460880) in view of Kieltyka et al (20030164577) further in view of Hallard et al (53462349). Gallagher et al do not teach inserting scrim material within the second cavity. However, Hallard et al adding flexible scrim material when making the hinge. Therefore it would have been obvious to use the teachings of Hallard et al in Gallagher et al's method of manufacturing air bag assembly in order to permit unfolding

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along while preventing complete separation of the door or panel from the fixed wall structure which could cause personal injury (col 3 lines 29-37).

8. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher et al (6460880) in view of Kieltyka et al (20030164577) further in view of Schiewe et al (6093358). Gallagher et al do not teach that the substrate includes an aperture, such that the material flows through the aperture from one of the hinge and the outer layer to the other of the hinge and the outer layer during over-molding. However, Schiewe et al teach molding an expandable product where the support structure/substrate has at least one aperture through which flowable expandable material enters. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention in order to cut equipment cost by reducing the number of injector required for molding both the top and the bottom layer.

Regarding claim 39, Gallagher et al teach the airbag assembly includes an airbag module housing having a closed end and an open end a plurality of outwardly extending mounting hooks being formed at the open end, wherein the airbag chute includes a plurality of hook-receiving apertures for receiving the hooks, wherein the hinge includes a plurality of elongated hook-receiving apertures for receiving the hooks, the hook-receiving apertures of the hinge extending inboard of the hooks such that the hinge is movable between a retracted position and an extended position relative to the chute, and wherein the hook-receiving apertures allow movement of the airbag chute relative to, and unrestrained by the hooks when the hinge moves between the retracted position and the extended position (fig 2 & 5).



9. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher et al (6460880) in view of Kieltyka et al (20030164577) further in view of Goldbach (6780365) and Kinane (20030080540). Gallagher et al teach a method of forming an airbag assembly and trim component for a vehicle (abstract) comprising: providing a substrate defining an airbag door (fig 5, **14**) but does not teach simultaneously over-molding an airbag chute for mounting the airbag assembly and a hinge for retaining the airbag door on the substrate during deployment of an air bag. However, Kinane teaches that the chute can be separately injection molded from the same molded-in-color polypropylene as the substrate (0011& fig 2). Furthermore, Goldbach teaches simultaneously over-molding first (hinge) and second (chute) thermoplastic parts being joined by the base body/substrate (abstract). Therefore Goldbach's teaching could be used in Gallagher et al's method for forming an air bag assembly to simultaneously mold the chute and the hinge in order to reduce cycle time (col 1 lines 42-47) and Kinane's teaching could be used in Gallagher et al's method for forming an air bag assembly to injection mold the chute unto a substrate in order to form the chute out of different material than the substrate.

Regarding claim 41, Gallagher et al teach the hinge and the airbag chute are formed from the same material (col 8 lines 16-21).

Regarding claims 42 and 43, Gallagher et al teach forming an outer out of urethane foam layer (col 11 lines 7-11), forming a substrate out of polypropylene (col 6 line 25), and then forming a hinge layer out another/third plastic material (col 11 lines 35-38).

Regarding claim 44, Gallagher et al teach that the outer layer and hinge could be made of the same material (col 11 line 7 & col 8 lines 16-28 & col 6 lines 22-30).

10. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher et al (6460880) in view of Kieltyka et al (20030164577) further in view of Goldbach (6780365) and Kinane (20030080540) and further in view of Hallard et al (53462349). Gallagher et al do not teach inserting scrim material within the second cavity. However, Hallard et al adding flexible scrim material when making the hinge. Therefore it would have been obvious to use the teachings of Hallard et al in Gallagher et al's method of manufacturing air bag assembly in order to permit unfolding along while preventing complete separation of the door or panel from the fixed wall structure which could cause personal injury (col 3 lines 29-37).

11. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher et al (6460880) in view of Kieltyka et al (2003016457 further in view of Goldbach (6780365) and Kinane (20030080540) further in view of Hallard et al (53462349) and further in view of Schiewe et al (6093358). Gallagher et al do not teach that the substrate includes an aperture, such that the material flows through the aperture from one of the hinge and the outer layer to the other of the hinge and the outer layer during over-molding. However, Schiewe et al teach molding an expandable product where the support structure/substrate has at least one aperture through which flowable expandable material enters. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention in order to cut equipment cost by reducing the number of injector required for molding both the top and the bottom layer.

Regarding claim 47, Gallagher et al teach the airbag assembly includes an airbag module housing having a closed end and an open end a plurality of outwardly extending mounting hooks being formed at the open end, wherein the airbag chute includes a plurality of hook-receiving apertures for receiving the hooks, wherein the hinge includes a plurality of elongated hook-receiving apertures for receiving the hooks, the hook-receiving apertures of the hinge extending inboard of the hooks such that the hinge is movable between a retracted position and an extended position relative to the chute, and wherein the hook-receiving apertures allow movement of the airbag chute relative to, and unrestrained by the hooks when the hinge moves between the retracted position and the extended position (fig 2 & 5).

12. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher et al (6460880). Gallagher et al teach providing a mold assembly having a mold cavity (fig 6); placing a substrate defining an airbag door into the mold cavity to define first and second cavities (fig 6) the substrate having a passenger-compartment-facing first surface and a second surface opposite the first surface (fig 1); injecting a first material into the first cavity to form an outer layer on the first surface and injecting a second material into the second cavity to form a hinge on the second surface of the substrate, the hinge for retaining the airbag door on the substrate during deployment of an air bag (fig 14). Although, Gallagher et al is silent about the method of disposing the skin layer, the examiner notes that Gallagher's choice of molding technique is injection molding (fig 5-6). Also, it is well known in the art that reaction injection molding is

commonly used to form skin layers, especially in air bag industries (PGPUB 20030205886, PGPUB 20030104168).

Claims 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher et al (6460880) in view of Kieltyka et al (20030164577).

Regarding claim 49, Gallagher et al teach providing a substrate defining an airbag door, the substrate having a passenger-compartment-facing first surface and a second surface opposite the first surface (fig 1 & 2) and also teach an outer layer (fig 14) and a hinge layer (fig 14), but does not teach simultaneously over-molding an outer layer on the first surface of the substrate, and a hinge on the second surface of the substrate. However Kieltyka et al teach simultaneously over-molding the upper (hinge) and lower (skin/outer layer) mold surface of a substrate (par 0018). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the teachings Kieltyka et al in Gallagher et al's method of manufacturing air bag assembly in order to reduce cycle time.

Regarding claim 50, Gallagher et al teach that the outer layer and hinge could be made of the same material (col 11 line 7 & col 8 lines 16-28 & col 6 lines 22-30).

Claims 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher et al (6460880) in view of Kieltyka et al (20030164577) further in view of Hallard et al (53462349). Gallagher et al do not teach inserting scrim material within the second cavity. However, Hallard et al adding flexible scrim material when making the hinge. Therefore it would have been obvious to use the teachings of Hallard et al in Gallagher et al's method of manufacturing air bag assembly in order to permit unfolding

along while preventing complete separation of the door or panel from the fixed wall structure which could cause personal injury (col 3 lines 29-37).

### ***Response to Argument***

13. Applicants argue that Gallagher et al is silent as to how the skin layer becomes disposed on the substrate (col 11 lines 7-12). The examiner notes that although Gallagher uses a broad language of "disposed," his choice of molding technique is injection molding (fig 5-6). Also, it is well known in the art that reaction injection molding is commonly used to form skin layers, especially in air bag industries (PGPUB 20030205886, PGPUB 20030104168). Applicants also argue that Kieltyka et al do not teach simultaneously over-molding two attachments to a substrate. The examiner would like to point the applicant to paragraphs 0017 & 0018. Here, Kieltyka et al teach a substrate being placed inside a molding tool having an upper surface and lower surface. Kieltyka teaches compression molding on the upper surface of the substrate and injection molding on the lower surface of the substrate. He also teaches carrying out of the two molding process (upper and lower) at the same time (see par 0018 towards the bottom of the paragraph).

Applicant's arguments filed 3/2/2006 have been fully considered but they are not persuasive for the reasons mentioned above.

### ***Conclusion***

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang W. An whose telephone number is (571) 272-1997. The examiner can normally be reached on Mon-Fri 7 AM - 3:30 PM.

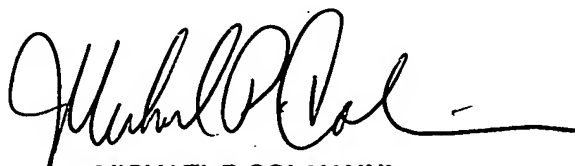
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sang Wook An  
Patent Examiner  
Art Unit 1732  
May 1, 2006

*SWA*



**MICHAEL P. COLAIANNI**  
**SUPERVISORY PATENT EXAMINER**